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ABSTRACT

The purpose of this study was to assess the effects of a program for training teachers in classroom management that was embedded in a mentor and beginning teacher induction program. Both mentor teachers and beginning teachers were randomly assigned to treatment conditions. The research sought to determine the effects of the classroom management intervention training on teachers' classroom management behaviors. Thirty-five mentor/inductee pairs participating in the study were divided into three groups. In the first group both mentor and inductee teachers received experimental treatment, only mentor teachers received treatment in the second group, and the third (control) group received no treatment. The intervention training model involved workshop activities focusing on planning for effective classroom management, implementing rules and procedures, and maintaining the management system. The design of the program and procedures followed during the three month period of training are described and a discussion is presented on an analysis of the findings. It is suggested that while pairing mentors with inductees in a training program is important because they learn to share the same knowledge base and known expectations, it may be cost effective for a school district implementing an induction program to train only mentors. Recommendations are made for further research. (JD)

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CLASSROOM MANAGEMENT INTERVENTION: THE EFFECTS OF TRAINING AND MENTORING ON THE INDUCTEE TEACHER'S BEHAVIOR

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CLASSROOM MANAGEMENT INTERVENTION: THE EFFECTS OF TRAINING AND MENTORING ON THE INDUCTEE TEACHER'S BEHAVIOR

Introduction

The transition from teacher preparation, known as the preservice, to the beginning years of teaching has been noted as complex. Considerable attention has been focused on the problems experienced by beginning teachers during the initial years of teaching (Fuller & Bown, 1975; Ryan, 1980; Veenman, 1984). At the same time, many have called for improvements in the quality of the nation's teaching force (National Commission on Excellence, 1983; Boyer, 1983; Goodlad, 1983; Sizer, 1984). Similarly, state legislators, accrediting agencies, and teacher education graduates themselves have questioned the standards of teacher preparation programs. Zimpher (1985) recognized the cumulative effects of these national, state, and local concerns and has suggested that attention should be focused on ways of improving teaching at the point of entry into the profession. The complexities facing beginning teachers coupled with concerns about the nation's schools pointed toward three central questions that undergirded this study. These included: (a) What were the complexities facing beginning teachers? (b) What current structures existed within the organization of teacher education to reduce those complexities? and (c) What intervention programs were introduced to reduce those complexities?

The Complexities Facing Beginning Teachers

Beginning teachers experienced their most difficult problems during the first years of teaching; yet little assistance has been provided to them (Adams, 1982). The beginning teachers have been expected, from the first

day, to instruct students and to perform the same tasks as veteran teachers. These tasks were not increased gradually; rather, the beginner has been assigned a full complement of teaching duties. To complicate matters, beginning teachers learned in individual cellular structures, e.g., behind their classroom doors. They have been confronted with a "sink or swim" situation (Lortie, 1975). Doyle (1980) added a contributing dimension to this scenario by describing the complexities of classrooms as crowded with "people, activities and interruptions." Thus, the teacher has been particularly vulnerable and was left with little time to think about and anticipate classroom events (Evertson, Hawley and Zlotnik, 1984). "In short, new teachers arrived in classrooms ill-equipped to handle the 'regular duties' of teaching and the concomitant 'reality shock' of the first year of teaching" (Howey, Matthes, and Zimpher, 1985, p. 61).

Current Structures that Exist to Reduce Complexities

If teaching is so complex for the beginning teachers, educators might have reasonably expected structures to exist within the organization of teacher education to deal with these complexities (see Figure 1). The first structured attempt has occurred during the initial teacher preparation period in which students, typically undergraduates, were preparing to become teachers. These programs consisted of courses in specialized subject areas, courses in methods of teaching, and opportunities to practice teaching in school settings. Ultimately, students were granted a license to teach. Even though teaching skills were taught during this period, beginning teachers have said they never acquired them, or that these skills were inadequately treated in their preservice programs (DeVoss, 1978, 1979, 1980; Katz, Raths,

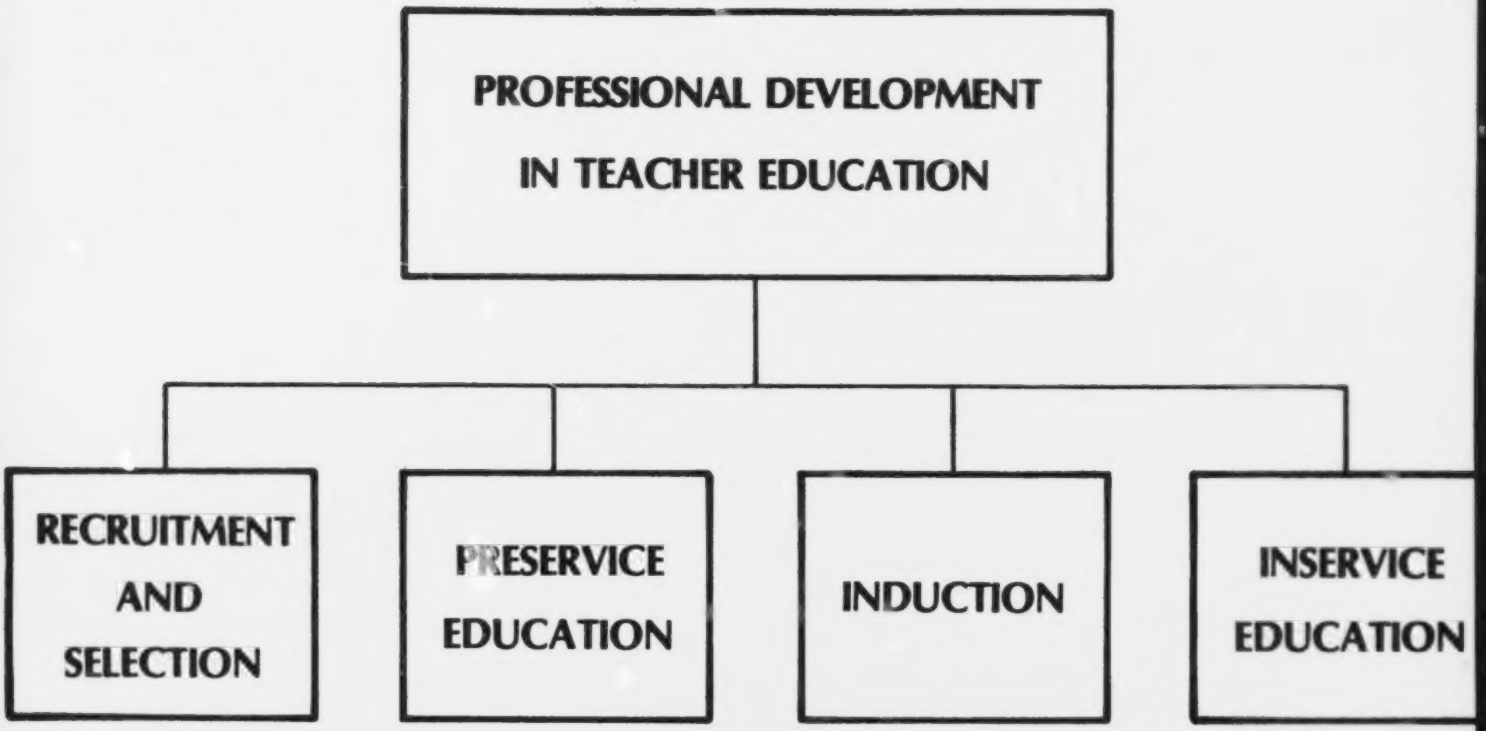

Figure 1. Existing structures in professional teacher development.

Mohnaty, Kurachi and Irving, 1981). Paradoxically, teaching skills have often been part of the required content in undergraduate teacher preparation courses (Zimpher, 1985). Koehler (1984) has succinctly captured possible reasons for the paradox and argues:

> All preservice training can be characterized as anticipatory socialization, which inevitably involves giving students answers to questions not yet asked, and not likely to be asked until students are in the thick of actual service. This aspect of socialization can be called the feed-forward problem. It includes resistance from the student at the time of exposure to given learnings and, later, protestations that the same learnings had not been provided, should have been provided, or should have been provided in stronger doses (p. 21).

A second structured attempt has occurred after the student's graduation from the initial teacher preparation programs. Inservice education and staff development programs were organized to enhance what had already been learned, what should have been learned, and/or what needed to be learned about current educational practices. The responsibility for the continuing education of teachers has generally been vested in the local district initiatives. However, problems have been identified in school districts attempting to achieve these goals. There is often little communication or coordination about the nature of needs or resources available relative to staff development (Cyphert, 1981; Lanier, 1984). Needs were perceived as deficiencies and, thus it was difficult to share needs (Howey, Matthes, and Zimpher, 1985). In addition, operational efforts within school districts fell to an administrator low in the administrative hierarchy. These administrators often worked in isolation from key individuals who make critical curricular decisions for the district (Lanier, 1984).

As described above, there were existing organizational structures in teacher education programs, which teachers entered and exited on a continuum

throughout their teaching careers. However, identified problems indicated the need for improvement in teacher education programs. In sum, preservice attempts were not being carried over to inservice, (Koehler, 1984) and higher education institutions were generally unwilling to assume responsibility for assisting beginning teachers during this induction period of teaching (Yarger, 1982). Inservice programs focusing on the teacher's transition into the initial years of teaching (Howey, Matthes, and Zimpher, 1985) or to help beginning teachers develop understandings of their work in complex environments were rare (Lanier, 1986). The teaching environment was not conducive to helping new teachers because they are isolated from their colleagues (Lortie, 1975); yet, the fact remained that beginning teachers faced complex problems (Fuller and Bown, 1975; Ryan, 1980; and Veenman, 1984). Therefore, it was important to explore different types of existing structures for continuing professional development in order to build realistic expectations for novice teachers, develop knowledge and skills to meet these expectations, and give novice teachers a better vision of their perceptions of teaching. The point was that structures needed to be developed which held promise for supporting the initial years of teaching on the assumption that these structures would continue to build and sustain good teachers (Carter and Richardson-Koehler, 1986).

Intervention Programs that Reduce Complexities

Interventions targeted to help beginning teachers deal with the complexities of teaching and becoming effective practitioners are urgently needed. Although assorted intervention strategies are underway at all stages of professional development a focus on helping beginning teachers at

their point of entry into the profession is emerging as the state of the art. Interventions selected for this study will be presented in what follows.

In an attempt to identify the perceived problems of beginning teachers, Veenman (1984) found the following to be the most commonly cited perceived problems of beginning teachers: (a) classroom discipline, (b) motivating students, (c) dealing with individual differences, (d) assessing student work, (e) relationships with parents,(f) organization of classwork, (g) insufficient materials and supplies, and (h) dealing with problems of individual students. Classroom management and organization were areas of concern to the nation's teachers and were among the most frequently requested topics by teachers for inservice; they headed the list of concerns of school administrators and have frequently attracted the attention of teacher educators and researchers (Evertson, Emmer, Sanford and Clements, 1983). Beginning teachers also perceived classroom management as a problem. The logical conclusion was that knowledge concerning these problems provided important information for the design and improvement of preservice and inservice programs.

As pointed out earlier, preservice could not be a means to an end. Without being confronted with the complete responsibility of teaching, it was difficult for teacher candidates to grasp the critical aspects of classroom instruction. Beginning teachers often complained about "classroom discipline" as if they never received training in classroom management. On the other hand, preservice instructors indicated specific points at which classroom management was a focus in their courses (Carter, and Richardson-Koehler, 1986). Carter and Richardson-Koehler (1986) referred to

this concept as event-structured knowledge, meaning beginning teachers learn better because they now see that they need it. Beginning teachers were faced with multifaceted tasks including managing instruction, establishing rules and procedures, and eliciting students' cooperation in classroom activities. These tasks occurred in designated environments, across time, and were expected to be sustained over several months. Research studies conducted by Evertson and her colleagues have made it possible to identify a number of characteristics of well-managed classrooms and have resulted in some widely disseminated principles of practice (Emmer, Evertson and Anderson, 1980; Evertson and Emmer, 1982; Evertson et al., 1983). This research was useful for first-year teachers who were planning for organization of their classrooms, for arranging physical environments that are conducive to instruction, and for monitoring student engagement and use of time in classrooms. This work served as an important knowledge base for an intervention model to help teachers become acquainted with standard practices in classroom management and effective teaching (Carter and Richardson-Koehler, 1986).

More recently, questions have emerged about how to translate this research-based content on classroom management for use by beginning teachers in induction programs. Mentoring, a system in which experienced teachers and beginning teachers work together to improve instructional practices, has been identified as a promising strategy for organizing induction programs and for translating research-based knowledge and organizing induction programs. An experienced teacher serving in a mentoring role for a beginning teacher, and providing support in the areas of improving classroom management, is an aspect of the induction process that has received insufficient research investigation.

In sum, the successful completion of well organized interventions to reduce the complexities of the beginning teachers should center around the needs of the beginning and mentor teachers. In addition, the support of institutions of higher education, state departments of education, and local school districts should be sought in order to help beginning teachers become more effective classroom managers.

Summary and Conceptual Framework

Development of the rationale for the classroom management and intervention used in this study has been depicted in Figure 2. This figure represents a concise summary and conceptual framework for the organization of literature and studies that have been reviewed in this paper. Entering this framework at the upper left in Figure 2, the concerns of beginning teachers have been indicated, including: concerns about self, concerns about the teaching situation, and concerns about pupils (Fuller, 1969). Extensive documentation in the literature has suggested that these concerns are highly typical of beginning teachers.

Tracing the progression of the framework in Figure 2 (see arrows) suggests that structures currently exist for addressing the concerns of beginning teachers. These traditionally have included preservice and inservice programs and staff development for teachers. More recently, a phase of teaching development following the teacher preparation program through the initial years of teaching has been referred to as an induction phase. It is at this point that questions have been raised about appropriate intervention strategies that can bring about improvements in teaching and increased resolution of the concerns of beginning teachers.

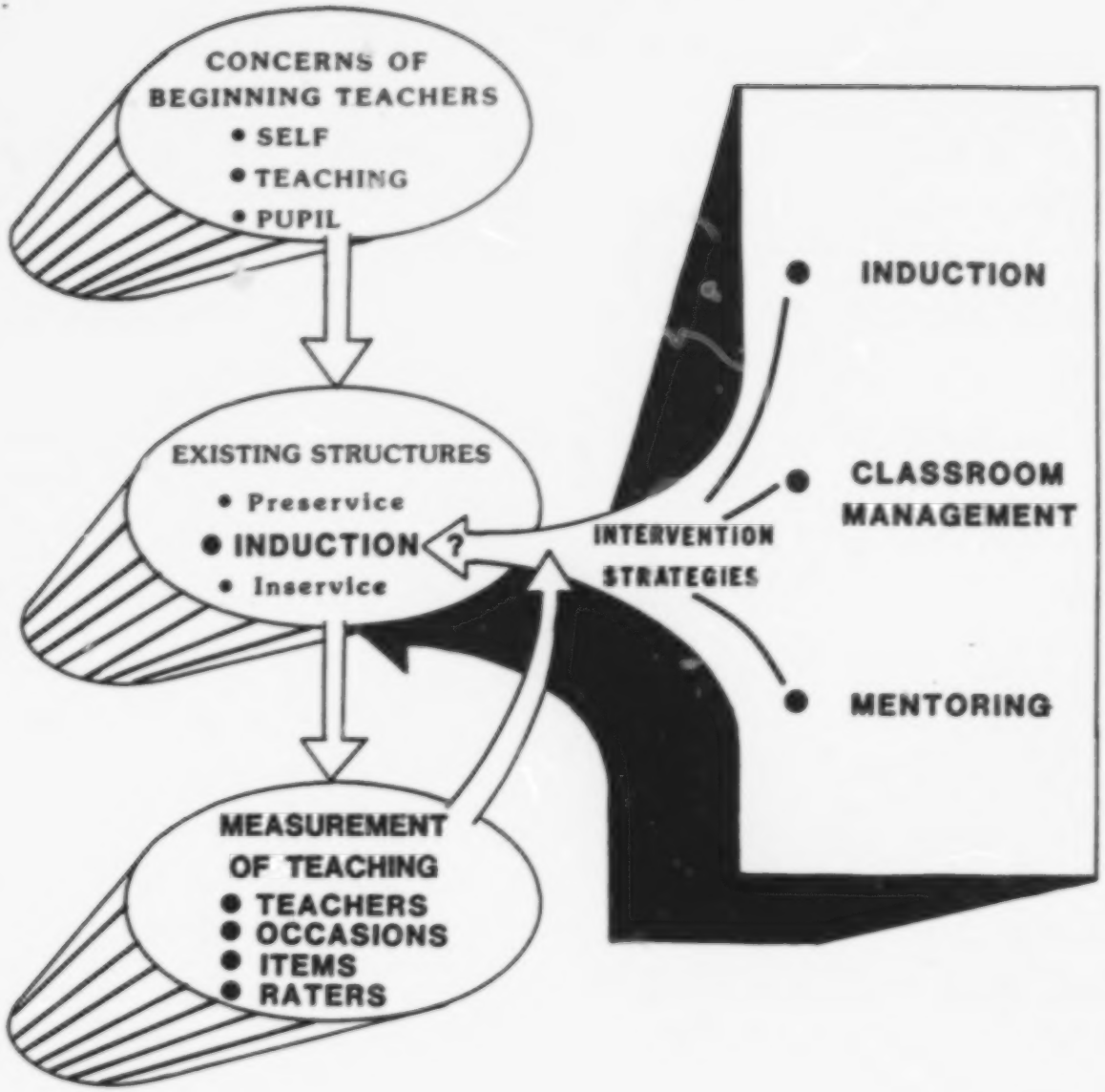

Figure 2 Conceptual Framework:
The Rationale for Intervention Strategies

Selected strategies identified as promising, based on examination of the literature, including establishment of formal induction programs that feature training in classroom management and facilitation of opportunities for development of mentoring relationships.

A final component of the framework presented in Figure 2 has focused on procedures adopted for measuring teaching. Recent methodological advances in the measurement of teaching behavior have produced systematic approaches for isolating the effects of occasions, raters, items and teachers. Referred to as Generalizability Theory, statistical techniques have been adopted for tracing the influences of these conditions on outcome of the selected intervention strategies. The utilization of these methodological techniques has increased potential for generalizing to other similar conditions in other schools and classroom settings.

Background and Setting

This dissertation was designed as a part of a larger research project funded by the U.S. Department of Education's Office of Educational Research and Improvement. The larger study, Using Research Knowledge to Improve Teacher Education: Developing an Inquiry Base for Induction (Zimpher, 1986), focused on a support system to help beginning teachers adapt in their new teaching environments. In order to accomplish this task beginning teachers were paired with experienced teachers (also called mentor teachers) to assist in providing this supportive environment. The planning committee included classroom teachers, administrative and supervisory personnel from five local school districts in central Ohio, and higher education faculty and researchers (see Figure 3).

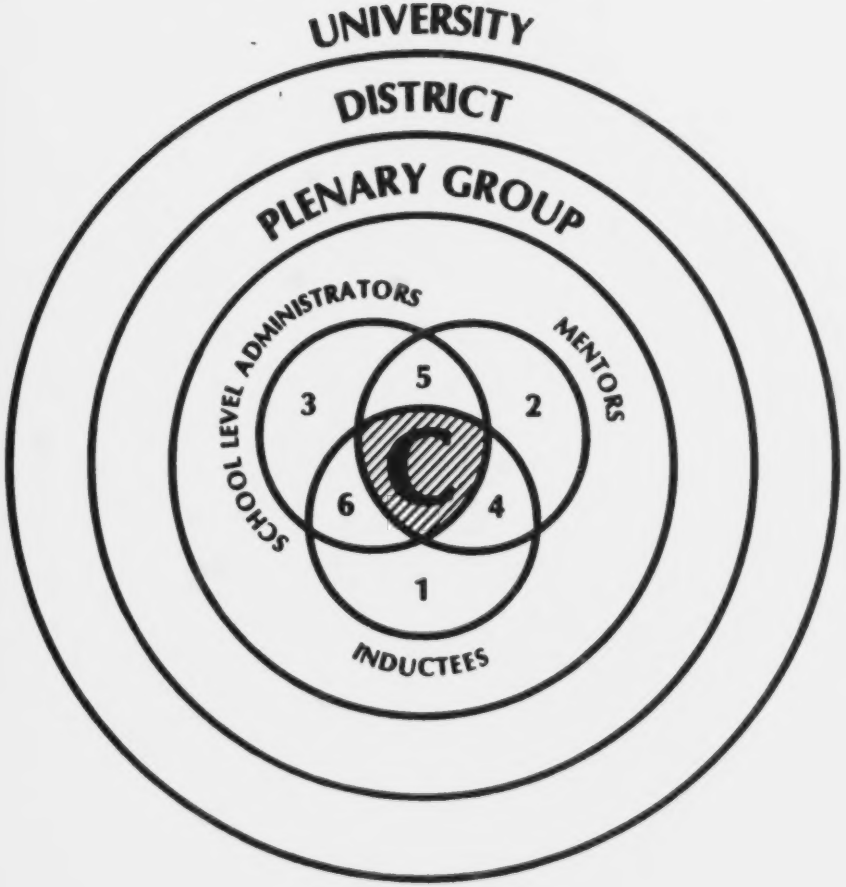

Figure 3 A model of collaborative interaction for induction programs.

One initial concern within the larger study focused on the development of a model for meeting the needs of beginning teachers and mentors serving in support capacities and organizing selected activities that would involve these two types of participants. Decisions were made to conduct an assessment of the needs of beginning teachers and experienced teachers (Stallion, 1985). Results indicated that of ten problem domains presented in the needs assessment, classroom management ranked second among the problems perceived by beginning teachers and fourth among the problems preceived by mentor teachers. Classroom management was selected as a focus for development because beginning teachers and mentor teachers perceived it as a mutual problem, and the planning committee was interested in helping teachers become effective classroom managers. Collaborative arrangements were made with this researcher and the planning committee members for the conduct of an experimental study on the effects of classroom management intervention.

Statement of the Problem

The purpose of this study was to assess the effects of a program for training teachers in classroom management. Training programs and observation procedures adopted for this study have been used successfully in earlier studies and have shown positive effects on teachers' classroom management behaviors and student achievement (Anderson, Evertson and Brophy, 1979; Brophy and Evertson, 1976; Evertson, Anderson, Anderson and Brophy, 1980; Evertson, Weade, Green and Crawford, 1985). What differs in this study from previous studies was that the training program was embedded in a mentor and beginning teacher induction program. Both mentor teachers and

beginning teachers were randomly assigned to treatment conditions. The second purpose was to assess the relative effects of the mentoring relationships on the beginning teachers' classroom management behaviors as affected by the training intervention.

Research Objective

What are the effects of classroom management intervention training and mentoring on the inductee teacher's classroom management behaviors?

Hypotheses

The following hypothesis guided this study: There will be differences among inductee teachers on observed classroom management behaviors.

Sub-hypotheses:

Hypothesis 1. Group I inductee teachers will be rated more favorably than Group II teachers on: (a) instructional management, (b) rules and procedures, (c) meeting student concerns, (d) managing pupil behavior, (e) student misbehavior, (f) student engagement ratings and (g) conference report forms.

Hypothesis 2. Group I inductee teachers will be rated more favorably than Group III on each of the above (a-g).

Hypothesis 3. Group II inductee teachers will be rated more favorably than Group III on each of the above (a-g).

Research Design

The research design selected to operationalize this study was an extension of the posttest only control group design (Campbell & Stanley,

1966). An extention of the Campbell and Stanley posttest only control group design was used in this study. This design is illustrated as follows:

R	X_{MI} (Group I)	O_I
R	X_M (Group II)	O_I
R	X_o (Group III)	O_I

In this design, three comparison groups are represented. The first two groups received an experimental treatment (X_{MI} and X_M), and the third group (X_0) did not receive an experimental treatment. This third group was referred to as the control group. The subscript designations refer to mentor (M) teachers and inductee (I) teachers who served as subjects in this study. Both mentor and inductee teachers assigned to the first treatment group received the experimental treatment. For mentor and inductee teachers assigned to the second treatment condition, the mentor teachers received the experimental treatment but the inductee teachers did not. For the pairs of teachers assigned to the third group, neither mentors nor inductees received the experimental treatment (see Figure 4). The observations that followed participation in each of the three treatment conditions (O_I) focused on the inductee teacher only.

Description of the Sample

All subjects selected for this study were involved in a school/university based induction project and constituted the target population for this study. For the purposes of the Induction Project, subjects were defined by Zimpher (1985) as: a first year teacher new to the

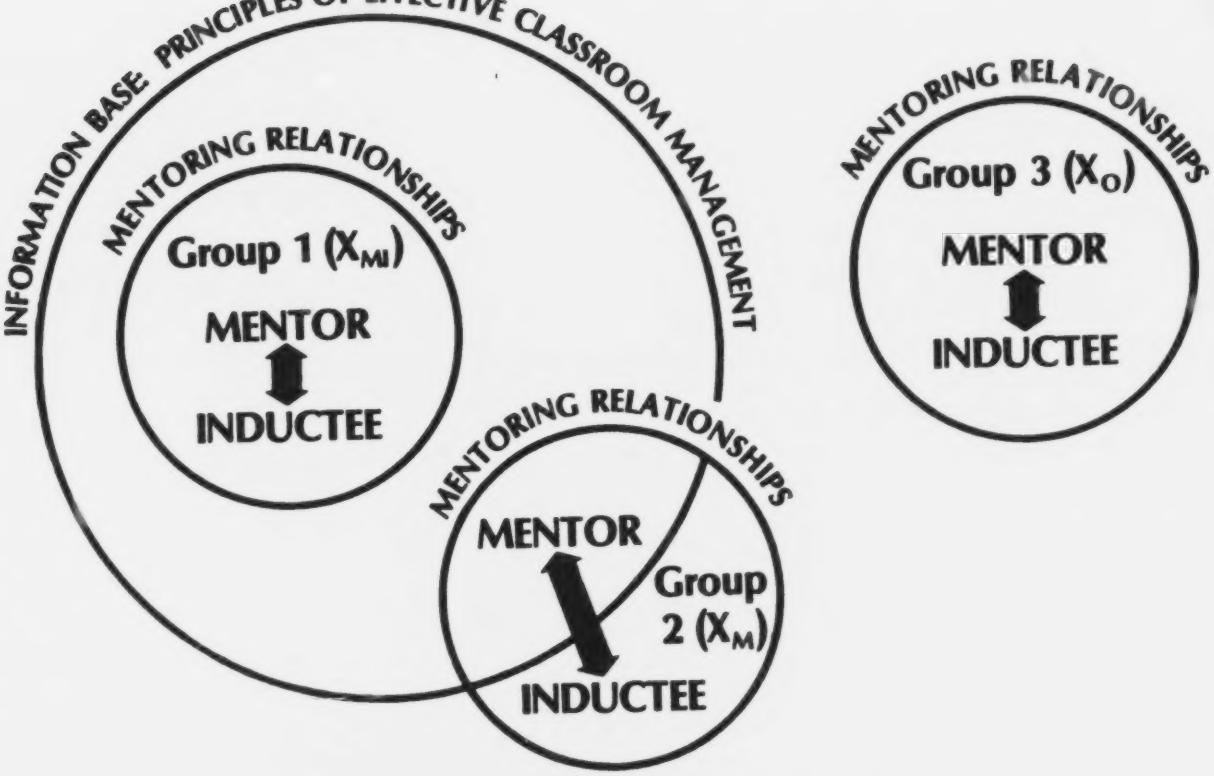

Figure 4. Mentors' and inductees' access to information about principles of effective classroom management by treatment groups.

classroom, a teacher returning after an extended leave, a teacher new to the grade level/subject matter, and/or a teacher new to the building or district. In an attempt to represent this population an accessible population of subjects were selected from nine school buildings located in one of the five local school districts.

The inductee teachers participating in the project numbered 35. Mentor teachers participating in the project also numbered 35 (i.e., there were 35 mentor/inductee pairs). As described above, the research design in this study examines outcome measures for subjects according to three group designations. Each group included mentor and inductee teacher pairs. The mentor teachers were carefully selected by their building principal so that pairs were matched by grade level or subject level. These paired assignments were made previously as part of the arrangements within the Induction Project. Pairs were selected intact from random assignments to one of the three groups. Prior to group assignments, pairs were randomly stratified by grade level (elementary, middle, and high school); pairs were then randomly assigned to the three levels of the treatment conditions.

Treatment, Instrumentation and Data Collection

Treatment. The experimental treatment consisted of a program of classroom management intervention training. The training was delivered in a workshop format and was conducted at a mid-point in the school year.

A classroom management training model provided the basis for developing the training workshop (see Table 1). The model was the product of a series of classroom management training studies conducted by Evertson and her colleagues (Emmer, Evertson & Anderson, 1980; Evertson, Anderson, Anderson &

Brophy, 1980; Evertson et al., 1983; Evertson et al., 1985). These studies, however, have focused primarily on classroom management training at or before the beginning of the school year. The training model was designed for prevention of classroom management problems rather than remediation of problems after they occur. In contrast there was a need in this study to implement the training after the spring break vacation. Therefore, adaptations in the management training model were necessary so that it could serve as an intervention model rather than a prevention model.

The intervention model has three central dimensions, i.e., planning, presenting, and maintaining, which remained unchanged from Evertson's prevention model (Evertson et al., 1983).

Table 1
The Classroom Management Intervention Training Model

<u>Effective classroom management requires planning</u>

1. Readying the classroom (planning use of space)
2. Developing rules for general behavior
3. Developing rules and procedures for specific areas:
    a. Student use of classroom space and facilities
    b. Student use of out-of-class areas
    c. Student participation during whole class activities
    d. Student participation in daily routines
    e. Student participation during small group activities
4. Deciding on incentives/consequences for appropriate/ inappropriate behavior

<u>Effective classroom management requires presenting (implementing)</u>

1. Teaching the rules and procedures
2. Teaching academic content
3. Communicating directions and concepts clearly

<u>Effective classroom management requires maintaining the management system</u>

1. Monitoring for behavior and academic compliance
2. Acknowledging appropriate behavior
3. Stopping inappropriate behavior
4. Using consequences/incentives consistently
5. Adjusting instruction for individual students/groups
6. Keeping students accountable for work

However, the concepts included in the workshop activities within each of these dimensions were adapted to meet the needs of the teachers at mid-year. For instance the training workshop was scheduled in the week prior to spring vacation and workshop activities centered around planning for the students' return to school following the break.

Observer training. In addition to the classroom management training, training was conducted for the observers of this study. The observers were members of the Franklin County/OSU Induction Project Planning Committee. These members included three of the school districts' administrative staff and five experienced teachers.

Observer training sessions were conducted during a series of four one-half day meetings. At the first observer training session, each observer was given a training manual containing descriptions of the three instruments. Materials used in the training included both written scripts of classroom situations and videotape recordings of teachers and students in typical classroom situations. At the conclusion of each half day training session either a videotape was viewed or an on-site classroom observation was conducted. The purpose of these simulations and on-site observations was to provide observers with opportunities to practice using the observation instruments. The training of the observers was conducted by the experimenter and the materials used for the training were developed by Evertson et al., (1983).

Instrumentation. There were four instruments used in this study which included: classroom rating scales, narrative records, student engagement ratings, and conference report forms. The classroom rating scales were designed to assess the effects of the classroom management intervention

training on the classroom management behaviors of the inductee teachers. The classroom rating scales consisted of a series of 22 Likert-scale items clustered under five domains: instructional management, rules and procedures, meeting student concerns, management pupil behavior, and student misbehavior. The second instrument, narrative records, were used to gather qualitative data about classroom activities and behaviors of both teachers and students in order to help the observer complete the classroom rating scale described above. The third instrument, student engagement ratings, was used to record the students' behavior during the classroom observation. The fourth instrument, conference report forms, yielded the frequencies of discussion of problems dealing with the trauma of beginning teachers.

Data collection. Procedures implemented in this study were organized according to a schedule arranged following the classroom management intervention training and the observer training (see Table 2). Two full days of training in the use of the classroom management model and the use of the instruments for data collection were received by this researcher. The classroom management model and instruments for data collection were developed by Evertson et al., (1983).

The timeline for the training and the data collection was from March to June of 1986. This schedule of events consisted of two full days of classroom management intervention training, two full days of observer training and approximately 60 days of on-site classroom observations.

Narrative record forms, classroom ratings scales, and student engagement ratings were used for each observation of each teacher. In total, 140 classroom observations of inductee teachers' classroom management behaviors, each approximately 40 minutes in length, were conducted.

TABLE 2

DATA COLLECTION

- **Timeline**
- **Observer training**
- **Classroom observations**

  number (4x35 per teacher = 140 obs.)
  length (40 minutes)

TIMELINE FOR SCHEDULED EVENTS

WORKSHOP TRAINING

March 11-12 (2 days)
May 27 (1 day)

OBSERVER TRAINING

March 17 (1/2 day p.m.)
March 24 (1/2 day p.m.)
March 24 (1/2 day a.m.)
April 28 (1/2 day p.m.)

DATA COLLECTION

March 17-May 30

Data Analysis

Analysis for the study addressed the primary research topics of intervention effectiveness as reflected in group differences on classroom rating scales, student engagement ratings and conference report forms. A suitable analysis technique was performed on each of the data sets corresponding to the different data collection methods used: (a) Classroom Ratings (b) Student Engagement Ratings and (c) Conference Report Forms. Each analysis will be discussed separately. (Note - Abbreviations used in the discussion: g,G=treatment grouping; t,T=teacher/inductee; o,O=observation occasion; and i,I=item. Uppercase letter denotes facets for which scores were averaged over D study conditions.)

Classroom Ratings. The classroom rating scales consisted of a series of Likert-scale items clustered under five domains: (a) instructional management; (b) rules and procedures; (c) meeting student concerns; (d) managing pupil behavior; and (e) student misbehavior.

To examine group effects, an analysis of variance (ANOVA) was performed with item as a repeated factor and with rating score as the dependent variable. A separate analysis was done for each of the five domains. Results of the F- tests allowed conclusions as to the effectiveness of the intervention.

The dependability of the teacher ratings on each domain was examined using generalizability theory. Following the recommendation of Brennan (1983) for analysis of distinctly different subgroups, each treatment group was analyzed separately. For each group, a G study on the random effects model, (o:t) x i, was performed in order to obtain estimates of variances

components for the different effects. A D study was next performed with teacher as the object of measurement and with teachers, occasions and items specified as random. Notationally, the D study model was (O: t) x I, with uppercase letters denoting facets for which ratings were averaged across conditions. Estimated variance components from the D study allowed calculations of universe score variance, error variance for relative decisions, and a generalizability coefficient. Again, results were obtained on each of the five domains.

Computer analysis was done using the GENOVA (generalized analysis of variance) fortran program developed by Brennan (1983). The program allowed ANOVA results as well as G and D study results, and was used for all analyses that followed in this discussion.

Student Engagement Ratings. The effectiveness of the training intervention as reflected in classroom engagement ratings was also examined through analysis of variance. The dependent variable was student engagement percentage averaged across the three successive (10-minute interval) observations of the three observation occasions. Three types of student task behavior--definitely on-task, probably on-task, and off-task--served as the basis for the engagement percentages.

An ANOVA was performed on the definite on-task behavior and on the off-task behavior to test for group differences. Results of the F-test were used to indicate group differences.

Generalizability theory again served as the basis for dependability measures for the engagement percentages. As above, each treatment group was analyzed separately. For each task behavior category and group, a G study analysis on the random effects model (o:t) was followed by a D study on the

O: t model with teacher as the object of measurement and with teachers and occasions specified as random. Estimates of universe score variance and relative error variance were obtained as well as the generalizability coefficient.

Conference Report Forms. The conference report forms yielded the frequencies of discussion of classroom management problems of beginning teachers. These problems were classified as being definitely related to classroom management, probably related to classroom management, or unrelated to classroom management problems. The frequencies of problem types were cross-classified with treatment group classification in a 3 x 3 contingency table. For analysis purposes, the two "related" categories were collapsed. A Chi-square analysis was performed on the resulting 3 x 2 table to examine for association between treatment group and problem type.

Conclusions

The specific conclusions drawn from this research study are discussed below in relation to each of the research hypotheses in the preceding section.

Hypothesis 1 was posited to investigate the differences among inductee teachers on observed classroom management behaviors when both inductee and mentor had received training (Group I) and when only mentors had been trained (Group II). In regard to instructional management, rules and procedures, meeting student concerns, managing pupil behaviors, and student misbehaviors, no significant differences were found between the two groups of inductee teachers, although group means varied in expected directions

(Stallion, 1987). The generalizability (G) study indicated that group means were dependable (stable) (Stallion, 1987). The decision (D) study indicated substantial contribution of occasion and/or item to the error variance (Stallion, 1987).

In regard to student engagement, comparisons revealed no statistically significant differences between the two experimental groups (Group I and II) in percentage of definitely-on task, probably-on task and off-task behaviors (Stallion, 1987). The generalizability (G) study indicated that group means were dependable (stable) (Stallion, 1987). The decision (D) study indicated substantial contribution of occasions and/or item to the error variance (Stallion, 1987).

In regard to the conference report forms, comparisons revealed no statistically significant differences between the two experimental groups (Groups I and II) in the number of classroom management problems discussed during the mentor/inductee conferences, which suggested minimal advantages for training mentor/inductee pairs as opposed to training mentors only, at least in regard to the frequency of classroom management issues discussed in mentoring conferences (Stallion, 1987).

Hypothesis 2 was posited to investigate the differences among inductee teachers on observed classroom management behaviors when both mentor and inductee teachers received training (Group I) and when neither mentor nor inductee teachers had been trained (Group III). In regard to instructional management, rules and procedures, meeting student concerns, managing pupil behaviors, and student misbehaviors, group means differed in expected directions. No significant differences were found, however, between the two groups of inductee teachers (Stallion, 1987). The generalizability (G)

study indicated that group means were dependable (stable) (Stallion, 1987). The decision (D) study indicated substantial contribution of occasions and/or item to the error variance (Stallion, 1987).

In regard to student engagement, comparisons revealed no statistically significant differences between the experimental group and the control group (Groups I and III) in percentage of definitely-on task and probably-on task behaviors (Stallion, 1987). However, the control group teachers had significantly more off-task behaviors in their classroom than experimental (Group I) teachers (Stallion, 1987). The generalizability (G) study indicated that group means were dependable (stable) (Stallion, 1987). The decision (D) study indicated substantial contribution of occasions to the error variance (Stallion, 1987).

In regard to conference report forms, comparisons revealed statistically significant differences between the experimental group and the control group (Groups I and III) in the number of classroom management problems discussed during the mentor/inductee conferences, which suggested that mentor/inductee pairs who were trained together discuss classroom management issues more frequently than untrained mentor/inductee pairs.

Hypothesis 3 was posited to investigate the differences among inductee teachers on observed classroom management behaviors when only mentor teachers received training (Group II) and when neither mentor nor inductee teachers had been trained (Group III). In regard to instructional management, rules and procedures, meeting student concerns, managing pupil behaviors, and student misbehaviors, no significant differences were found between the two groups of inductee teachers (Stallion, 1987). The

generalizability (G) study indicated that group means were dependable (stable) (Stallion, 1987). The decision (D) study indicated substantial contribution of occasions and/or item to the error variance (Stallion, 1987).

In regard to student engagement, comparisons revealed no statistically significant differences between the experimental group and the control group (Groups II and III) in percentage of definitely-on task and probably-on task behaviors (Stallion, 1987). However, off-task behaviors resulted in statistically significant differences in the two group means (Stallion, 1987). Means varied in expected directions. That is, untrained teachers had more off-task behaviors than mentor-trained teachers. The generalizability (G) study indicated that group means were dependable (stable) (Stallion, 1987). The decision (D) study indicated substantial contribution of occasions to the error variance (Stallion, 1987).

Relative to conference report forms, comparisons revealed statistically significant differences between the experimental group and the control group (Groups II and III) in the number of classroom management problems discussed during the mentor/inductee conferences (Stallion, 1987). This finding suggested that mentor-trained pairs discuss classroom management issues more frequently than untrained mentor/inductee pairs. Training of mentors influenced the content of mentoring conferences.

Implication for Practice

Findings in this study can be examined for their appropriateness and usefulness in designing intervention programs for the induction stage of professional development. This study examined the relative effects of

classroom management training and mentoring relationships on the observed classroom performance of beginning teachers. The implications outlined in this section suggest specific issues that ought to be considered in designing induction programs in which classroom management and mentoring are part of the training content.

The effectiveness of the management training workshops has been consistently documented in earlier studies (Anderson, et al., 1979; Brophy and Evertson, 1976; Evertson et al., 1980; Evertson et al., 1983; Evertson et al., 1985). However, all of these earlier studies have been preventative in nature. Training was conducted prior to the start of the school year. In this study, the effectiveness of an intervention model of classroom management training has been tested during the school year. Training was conducted at a mid-point in the school year (March). Findings using the interactive model revealed, in general, that trained teachers rated higher than untrained teachers, although differences were not significant. Significant differences, also favoring the trained teachers, were identified on student engagement ratings in the category of off-task behaviors. That is, significantly fewer students in trained teachers' classrooms demonstrated off-task behaviors than in untrained teachers' classrooms. Hence, the results were mixed.

Possibly intervention workshops delivered in March came too late in the school year to realize significant treatment effects. Management procedures and expectations for student behavior may have been firmly established, and therefore, were not amenable to change. Training conducted prior to the mid-point of the school year may be advisable. In addition, the length of

the training and the components of the training might be revised, too. However, trained teachers were, at least, able to reduce the percentage of off-task behaviors in their classrooms.

The definition of beginning teachers used in the Induction Project may also have influenced outcomes in this study. Beginning teachers, as defined in the project, included first year teachers, teachers returning after a leave of absence, teachers changing grade level or subject matter, and teachers changing building or school district. These teachers may have resented being categorized as inductee teachers and may not have been receptive to the classroom management training. Careful consideration needs to be given to the various prior experiences of "beginning" teachers when broad definitions are used in induction programs. Additional factors influencing outcomes in this study may have been (a) that principals needed to be more closely involved in the classroom management intervention training, or (b) that due to lack of release time, teachers did not have adequate opportunities to share the training in the mentoring conferences.

The second primary focus of this study was the relative effects of the mentor/inductee relationships on the inductees' classroom performance. In contrast to the number of studies supporting the effects of the classroom management training, very little empirical support was available about the effects of mentoring on teachers' classroom behaviors. This study was, at least, one of the first to test the effects of mentoring within an experimental design.

Although effects of classroom management intervention training were identified (student engagement ratings), the presence or absence of mentor teachers in the training did not contribute to differences in the observed

classroom management behaviors of their paired inductee teachers. Perhaps, mentor/inductee teachers who were trained as pairs did not perceive the need to share as much of the knowledge base as did mentors who were trained alone; however, these differences were not significant. Findings indicated that the mentor teachers were a vital component in transferring the knowledge base of classroom management principles; however, inductees may not need to be present during the training. This researcher believes it is also probable that mentoring is more successful on a one-to-one ratio. This researcher also thinks that pairing a mentor teacher with an inductee teacher is important because they learn to share the same knowledge base and known expectations. However, it may be cost effective for a school district implementing an induction program to train only the mentors.

Findings reported in the conference report forms which related to the mentoring relationships were statistically significant between the trained and untrained inductees. It is possible that mentor/inductee pairs were able to talk about classroom management problems as reflected in their conference report forms, even though their observed classroom management practices did not show significant differences. It is also possible that reflection about classroom management processes needs to be more systematic, structured, and more goal-directed than the conference report form permitted. Additionally, if reflection is not goal-directed or systematic, it would make little difference whether the reflection was accomplished by the inductee teacher alone or in the company of a mentor. The difference between trained and untrained pairs on conference report forms does suggest that a shared knowledge base, introduced in the training, does get discussed in the conferences. For the untrained pairs, there may have been little of substance for discussion.

Recommendations for Further Research

Research to increase the effectiveness of classroom management intervention training, where groups of paired mentor and inductee teachers are working together to improve classroom management performances, is highly recommended. Based on the findings and limitations of this study, the following specific recommendations for further research are offered:

1. Principals of the mentor and inductee pairs need to participate in the classroom management workshop, so that they better understand both the training and the research approach.
2. Classroom management intervention training needs to be conducted earlier in the year, perhaps after the traditional holiday Christmas break instead of at a spring break time of year.
3. The classroom management workshop training time should be increased from two days in length to two and one-half days or three days in length.
4. The classroom management workshop should include training in the use of the conference report forms.
5. The nature of the content of the classroom management intervention training should be revised to be more closely in line with the time of the intervention and the needs of the beginning teachers.
6. Mentor and inductee teachers need to be grouped according to their degree of newness, (first year teachers, teachers returning after a leave of absence, teachers changing district, building, grade level and/or subject matter). After such grouping, the effects of the classroom management training could be examined by degrees of

newness. In addition, a correlational study might be useful to determine if the degree of newness is related to the effectiveness of the classroom management intervention.

7. Due to findings that groups differed in expected directions, although not at a significant level, replications of the design of study should be done to test the effect of mentoring relationships on inductees' classroom performance.
8. The number of classroom observations should be increased from four per teacher to six per teacher.
9. The same observers should rate the same teachers (observer 1 should rate teacher 1 all six times).
10. The classroom management observation should be conducted on the same day of the week, at the same time of day, during the teaching of the same subject matter.
11. The number of teachers in the study should be increased and perhaps the population expanded to include an inner city school as well as a rural or suburban school.
12. In any future pre-test and posttest designs, classroom observations should be conducted at the outset to assess classroom management conditions (levels of student engagement) prior to the intervention training. Although teachers were randomly assigned to treatment conditions, early observations might provide an extra level of confidence in the random assignments.
13. The classroom rating scale deserves attention. Scaling revisions would be useful in improving data management; this finding is based on the difficulty encountered by this researcher in managing the data during the analysis.

14. The narrative notes that were written on each observation should be analyzed as enrichment data that would give further insights into the effectiveness of the classroom management behaviors of the inductee teachers.

References

Adams, R. (1982). Teacher development: A look at changes in teacher perceptions and behaviors across time. Journal of Teacher Education, 32(5), 21-24.

Anderson, L., Evertson, C., & Brophy, J. (1979). An experimental study of effective teaching in first grade reading groups. Elementary School Journal, 79, 193-233.

Boyer, E. (1983). High school. New York: Harper and Row.

Brennan, R. (1983). Elements of generalizability theory. Iowa City, IA: The American College Testing Program.

Brophy, J. & Evertson, C. (1976). Learning from teaching: A developmental perspective. Boston: Allyn & Bacon.

Campbell, D. & Stanley, J. (1963). Experimental and quasi-experimental designs for research. Boston: Houghton Mifflin.

Carter, K. & Richardson-Koehler, V. (1986). The process and content of initial year of teaching programs. Proceedings from the Illinois State Board of Education Conference on the Initial Year of Teaching. Springfield, IL: Illinois State Board of Education.

Cyphert, F. (1981). Administrative leadership in inservice. Mimeograph, Columbus, OH: The Ohio State University, College of Education.

DeVoss, G. (1978, 1979, 1980). Technical reports: Instructional follow-up studies. Columbus, OH: The Ohio State University, College of Education.

Doyle, W. (1980). Research on teaching in classroom environments. In G. Hall, S. Hord, & G. Brown (Eds.). Exploring issues in teacher education. Austin, TX: University of Texas Research and Development Center for Teacher Education.

Emmer, E., Evertson, C., & Anderson, L. (1980). Effective classroom management at the beginning of the school year. Elementary School Journal, 80, 219-231.

Evertson, C., Anderson, C., Anderson, L., & Brophy, J. (1980). Relationships between classroom behaviors and student outcomes in junior high mathematics and English classes. American Educational Research Journal, 17, 43-60.

Evertson, C. & Emmer, E. (1982). Effective management at the beginning of the school year in junior high classrooms. Journal of Educational Psychology, 74, 485-498.

Evertson, C., Emmer, E., Sanford, J., & Clements, B. (1983). Improving classroom management: An experiment in elementary classrooms. Elementary School Journal, 84, 173-188.

Evertson, C., Hawley, W. & Zlotnik, M. (1984). The characteristics of effective teacher preparation programs: A review of research. Prepared for the Educational Analysis Center, Office of Planning, Budget & Evaluation. Washington, DC: U.S. Department of Education.

Evertson, C., Weade, R., Green, J., & Crawford, J. (1985). Effective classroom management and instruction: An exploration of models. Final report. (NIE-G083-0063). Washington, DC: National Institute of Education.

Fuller, F. & Bown, O. (1975). Becoming a teacher. In K. Ryan (Ed.). Teacher Education. Chicago, IL: University of Chicago Press.

Goodlad, J. (1982). A place called school. New York: McGraw Hill.

Howey, K., Matthes, W., & Zimpher, N. (1985). Issues and problems in professional development: A review of selected literature pertaining to the recruitment, initial, inductive and inservice education of teachers: Final report. (Contract No. CP/PD-001). Elmhurst, IL: North Central Regional Educational Laboratory.

Katz, L., Raths, J., Mohanty, C., Kurachi, A., & Irving, J. (1981). Follow-up studies: Are they worth the trouble? Journal of Teacher Education, 22(2), 18-24.

Koehler, V. (1984). Research on preservice teacher education. Paper presented at the national conference on teacher education, University of Texas Research and Development Center, Austin, TX.

Lanier, J. (1984). Research on teacher education. Occasional paper 80. East Lansing, MI: Michigan State University, Institute for Research on Teaching.

Lanier, J. (1986). Research on teacher education. In M. C. Wittrock (Ed.), Handbook for research on teaching, Third edition. New York: Macmillan.

Lortie, D. (1975). School teacher: A sociological sudy. Chicago, IL: University of Chicago Press.

National Commission on Excellence. (1983). A nation at risk. Washington, DC: U.S. Government Printing Office (ERIC Document Reproduction Service No. 226 006).

Ryan, K. (Ed.). (1980). Biting the apple: Accounts of first-year teachers. New York: Longman.

Sizer, T. (1984). A study of high schools. Cambridge, MA: Harvard University Press.

Stallion, B. (1985). The Franklin County/OSU needs assessment for beginning teachers and the Franklin County/OSU needs assessment for mentor teachers. Using research knowledge to improve teacher education: Developing an inquiry base for induction (Contract No. 85-0012). Washington, DC: Office of Educational Research and Improvement.

Stallion, B. (1987). Classroom management intervention: The effects of training and mentoring on the inductee teacher's classroom practices. Unpublished doctoral dissertation, The Ohio State University, Columbus, OH.

Veenman, S. (1984). Perceived problems of beginning teachers. Review of Educational Research, 54(2), 143-178.

Yarger, S. (1982). Summary of analyses for lack of recognition of the importance of induction in U.S. teacher education. Paper presented at the annual meeting of the American Educational Research Association, New York.

Zimpher, N. (1985). Using research knowledge to improve teacher education: Developing an inquiry base for induction (Contract No. 85-0012). Washington, DC: National Institute of Education.

Zimpher, N. (1986). Using research knowledge to improve teacher education: Implementation of an induction program for inquiring professionals. (Contract No. 85-0012). Washington, DC: Office of Educational Research and Improvement.